

Draft PBT Rule
Chapter 173-333 WAC
PBT Rule Advisory Committee Review Draft

Part I - General Provisions

WAC 173-333-100

Introduction

Persistent, bioaccumulative toxins (PBTs) are chemicals that pose a unique threat to human health and the environment in Washington state. They remain in the environment for long periods of time, are hazardous to the health of humans and wildlife, and can build up in the food chain, and can be transported long distances and readily move between air, land and water media.

Because of the unique threat that these PBTs pose, special attention is necessary to identify actions that will minimize or eliminate threats to human health and the environment. While there are a variety of regulatory and non-regulatory activities that address the uses and releases of PBTs, there remains a need to address these chemicals through specific measures in order to fully achieve significant and measurable reductions over time to further protect current and future generations of Washingtonians.

The goal of this chapter is to manage, reduce or eliminate the uses and releases of PBTs in Washington through the following means:

- Specific chemical action plans developed for listed PBTs,
- Continued environmental monitoring,
- Increased public awareness, and
- Promotion of voluntary reduction measures.

WAC 173-333-~~110~~ 400- What is the Purpose of this Chapter? ~~Goal and Purpose~~

~~(1) What is the goal and the purpose of this chapter?~~

~~The goal of this chapter is to minimize threats to human health and the environment by reducing and, where feasible, phasing out the uses and releases of persistent, bioaccumulative toxins (PBTs) in Washington.~~

- (1) The purpose of this chapter is to:
- (a) Establish criteria Ecology will use to identify persistent bioaccumulative toxins that pose human health or environmental impacts in Washington State;
 - (b) Establish a list of persistent bioaccumulative toxins.
 - (c) Establish procedures Ecology will use to review and periodically update the list;

- (d) Establish criteria for selecting persistent bioaccumulative toxins for which Ecology will prepare chemical action plans;
- (e) Define the scope and content of chemical action plans and establish the process Ecology will use to prepare those plans, and;
- (f) Define the processes Ecology will use to coordinate the implementation of this chapter with the Department of Health and other state agencies.

WAC 173-333-120 440

Applicability

(1) This chapter applies to the Department of Ecology (Ecology). ~~Nothing herein shall be construed to diminish Ecology's authority to address a permitted, unpermitted, or threatened release of any PBT under other applicable laws and regulations.~~ This chapter does not impose new requirements on persons using or releasing PBTs, and it does not create new authorities nor does it constrain existing authorities for Ecology.

(2) This chapter provides for public involvement opportunities to participate in the Ecology processes for identifying PBTs and developing recommendations on measures to **address uses and releases of PBTs.** ~~address current uses and releases, contamination problems resulting from past releases, and proposed uses or releases from new sources. This chapter does not impose new requirements on persons who use or release PBTs, have caused past releases of PBTs, or propose new uses or releases. Instead, it describes how Ecology will set its priorities in addressing hazards related to PBTs.~~

~~————(3) This chapter does not create new authorities nor does it constrain existing authorities.~~

WAC 173-333-120 Chapter Summary

~~(1) **Introduction.** This section provides a summary of the PBT Rule. If there are any inconsistencies between this section and any specifically referenced sections, the referenced section will govern.~~

~~(2) **What are persistent bioaccumulative toxins (PBTs)?** PBTs are chemicals or metals that:~~

- ~~• Remain in the environment for a long time (persist) without breaking down;~~
- ~~• Accumulate in the environment and build up in the tissues of humans, fish and animals (bioaccumulate); and~~
- ~~• Are toxic to living organisms, including humans.~~

~~(3) **Identifying and listing PBTs.** This chapter contains a list of PBTs that may require further actions to reduce, or where feasible, phase out uses and releases in Washington.~~

~~(a) **PBT List.** The current list of persistent bioaccumulative toxins is specified in WAC 173-333-310.~~

DRAFT PBT Rule

December 8, 2004

Ecology Proposed Final Draft for

December 14 PBT Rule Advisory Committee meeting

~~(b) **Criteria for identifying and adding PBTs to the list.** Ecology will use the PBT criteria specified in WAC 173-333-320 to determine whether a chemical, or group of chemicals, should be included on the PBT list.~~

~~(c) **Criteria for removing PBTs from the list.** Ecology will use the criteria in WAC 173-333-330 to determine whether a chemical, or group of chemicals, should be removed from the PBT list.~~

~~(d) **Process for adding and removing PBTs from the List.** WAC 173-333-340 describes the process that Ecology will use to add and remove chemicals from the PBT List.~~

~~(d) **Involving the public in updates of the PBT list.** If Ecology decides to revise the PBT list it will use the procedures specified in WAC 173-333-340 to notify and involve the public.~~

~~(4) **Priorities for chemical action plans (CAPs).** Ecology will use the evaluation criteria specified in WAC 173-333-410 to prioritize, and then select, PBTs or groups of PBTs, for which CAPs will be prepared.~~

~~(5) **Chemical action plans (CAPs).** When preparing a CAP, Ecology will include, at a minimum, the following information in each CAP:~~

~~—(a) Existing information regarding the chemical.~~

~~(b) Uses and releases.~~

~~(c) Current management approaches.~~

~~(d) Policy options.~~

~~(e) Recommendations.~~

~~(e) Technical feasibility analysis.~~

~~(f) Economic analyses.~~

~~(g) Proposed implementation.~~

~~(h) Performance measures.~~

~~Ecology will develop recommendations for reducing and, where feasible, phasing out uses and releases of individual chemicals when preparing CAPs. As discussed in Part IV of this chapter, Ecology will consider a wide range of factors when preparing recommendations for individual chemicals.~~

~~(6) **Coordination with other agencies.** Ecology shall coordinate with the department of health (DOH), and other appropriate agencies in the development of the CAP so that the CAP content, alternatives and recommendations are consistent with and supported by DOH and/or other appropriate agencies.~~

~~(7) **Public involvement in CAP development.** Ecology will involve the public in the development of the CAP. After public comment on the draft CAP, Ecology will prepare a final CAP.~~

WAC 173-333-130

Exemptions to the PBT list

Any pesticide with a valid registration on ~~[insert date of rule adoption]~~ or after the effective date of this rule ~~that has been~~ issued by the Environmental Protection Agency under the Federal Insecticide Fungicide and Rodenticide Act, 7 U.S.C. 136 et seq., or any fertilizer regulated under the Washington Fertilizer Act, chapter 15.54 RCW, ~~will shall~~ not be included ~~on the in a~~ persistent bioaccumulative toxin ~~rulemaking process, list established under this chapter.~~ or CAP undertaken by Ecology.

WAC 173-333-140

Administrative Principles

(1) ~~Introduction.~~ Ecology will implement the *Proposed Strategy to Continually Reduce Persistent Bioaccumulative Toxins (PBTs) in Washington State* (December 2000) and any subsequent PBT Strategy document update(s) consistent with this rule.

(1) ~~(2)~~ **Scientific information.** Ecology will base decisions on PBTs on sound public policy and made as a result of this rule will be based on sound credible scientific information. However, Ecology believes that Lack of full scientific consensus certainty should not be used as a justification for delaying reasonable measures to prevent or minimize harm to human health or the environment.

(2) ~~(3)~~ **Public involvement.** Ecology will provide opportunities for public involvement is encouraged during decision-making processes for identifying PBTs and preparing a CAP.

(3) ~~(4)~~ **Clear documentation.** Ecology will provide document clear and understandable descriptions and rationale for decisions implementing this chapter.

(4) ~~(5)~~ **Predictability.** Ecology will implement this chapter will be implemented in ways that allow stakeholders, interest groups, and the public to plan their participation in decision-making processes and future responses to recommendations that result from those processes.

(5) ~~(6)~~ **Coordination.** When appropriate, Ecology will coordinate with other state agencies and local governments, tribes, and interested parties in the development and implementation of CAPs and when revising the PBT List.

(6) **Rule Amendments.** When amending any portion of this rule, Ecology will follow the requirements of the Administrative Procedures Act (APA) – Chapter 34.05 RCW.

PART II - Definitions

WAC 173-333-200

Definitions

“Administrative Procedures Act” or “APA” means the Washington Administrative Procedures Act, RCW 34.05.

DRAFT PBT Rule

December 8, 2004

Ecology Proposed Final Draft for

December 14 PBT Rule Advisory Committee meeting

“Bioaccumulation” means the process by which substances increase in concentration in living organism as they take in contaminated air, water, soil, sediment or food because the substances are very slowly metabolized or excreted.

~~**“Bioaccumulation”** means the process by which organisms accumulate a chemical in their body as a result of uptake from all environmental sources.~~

“Bioaccumulation factor” or “BAF” means the ratio of the concentration of a chemical in an organism to the concentration of the chemical in the surrounding environment. The BAF is a measure of the extent to which the organism accumulates the chemical as a result of uptake through ingestion as well as contact from contaminated media, such as water.

“Bioconcentration factor” or “BCF” means the ratio of the concentration of a chemical in an organism to the concentration of the chemical in the surrounding environment. The BCF is a measure of the extent of chemical partitioning between **an organism and** their surrounding environment. ~~The BCF does not evaluate uptake through ingestion, only through contact with environmental media.~~

“Carcinogen” means any chemical that **causes or aggravates cancer**. ~~or agent that produces or tends to produce cancer in humans. For implementation of this chapter, the term carcinogen applies to chemicals on the United States Environmental Protection Agency lists of A (known human) and B (probable human) carcinogens, and any chemical that causes a significant increased incidence of benign or malignant tumors in a single, well-conducted animal bioassay, consistent with the weight of evidence approach specified in the United States Environmental Protection Agency's Guidelines for Carcinogen Risk Assessment as set forth in 51 FR 33992 et seq.—~~

“Chemicals” means a naturally occurring element, mixture, or group of organic and inorganic compounds that is produced by or used in a chemical process.

“Chemical group” means a grouping of chemicals which share a common chemical structure.

“Chemical Action Plan” or “CAP” means a plan that identifies, characterizes and addresses uses and releases of a specific PBT or a group of PBTs and facilitates implementation of measures to manage, **reduce or** minimize, and, where feasible, eliminate such uses and releases.

“Credible Scientific Information” means information that is based on a theory or technique that is generally acceptable in the relevant scientific community or has been collected or derived using standard methods and protocols and appropriate quality assurance and control procedures.

“Cross-media Transfer of Chemicals” means the movement of a chemical from one medium, such as air, water, soil, or sediment, to another.

“Degradation” means the processes by which organic chemicals are transformed into derivative chemicals and ultimately broken down.

“Ecology” means the Department of Ecology.

“Ecology PBT Strategy” means the strategy Ecology developed in December 2000, as directed by the Legislature, which specifies a long range plan to continually reduce risks to human health and Washington’s environment from exposures to PBTs.

“Environment” means any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air. ~~within the state of Washington or under the jurisdiction of the state of Washington.~~

“Environmental half-life” means the time required for the concentration of a chemical to diminish to half its original value. The environmental half-life of a chemical is a measure of **a** ~~that~~ chemical’s persistence in the environment.

“Feasible” means capable of being accomplished or brought about **or capable of being utilized or dealt with successfully.** ~~with existing technologies, market forces, or public will.~~

“Log-octanol water partition coefficient” or “Log K_{ow}” means the ratio of a chemical's concentration in the octanol phase to its concentration in the aqueous phase of a two-phase octanol/water system as expressed in a logarithmic format.

“Manage, Rreduce and where possible or eliminate” means actions to reduce the uses and releases of PBTs and may include process changes designed to reduce or eliminate PBT generation and releases or product substitution to eliminate uses and releases.

“Minimize” means actions to reduce the uses and releases of PBTs and may include application of best available technology to reduce PBT generation and releases, process changes to reduce or eliminate PBT generation and releases, product substitution to eliminate uses and releases and other measures to directly or indirectly reduce threats to human health and the environment.

“Media or Medium” means a component of the environment (air, water, soil or sediment) in which a contaminant is measured and an organism lives its life, and from which an organism can accumulate contaminants.

“Persistent bioaccumulative toxin” or “PBT” means a chemical or chemical group that meets or exceeds the criteria for persistence, bioaccumulation and toxicity criteria established in this chapter.

“Persistence” means the tendency of a chemical to remain in the environment without transformation or breakdown into another chemical form. It refers to the length of time a chemical is expected to reside in the environment and be available for exposure.

“Sensitive Population Group” means (a) groups of people that exhibit a different or enhanced response to a PBT than most people exposed to a similar level of the PBT because of genetic makeup, age, nutritional status or exposure to other toxic substances and/or (b) groups of people

that are at greater risk because they have a higher potential for exposure than the general population.

“**Toxicity**” means the **degree to which** ~~ability of~~ a substance **or mixture of substances** ~~to cause injury or death to an organism,~~ including **can harm** humans, plants or wildlife.

Part III – The PBT List and Criteria and Procedures for Revising the List

WAC 173-333-300 What is the purpose of the PBT List?

- (1) **Purpose.** The purpose of the PBT List is to identify chemicals that require further action because they remain (“persist”) in the environment for long periods of time where ~~initially low concentrations can increase as the chemicals move through the food chain~~ **they can** (“bioaccumulate”) to levels that pose threats to human health and environment in Washington.
- (2) **Intended uses of the PBT List.** **Ecology will use** ~~the PBT List will be used~~ in the following ways:
 - a. **Chemical action plans.** **Ecology will use** ~~the PBT List will be used~~ to select chemicals for chemical action plan **development** ~~preparation~~.
 - b. **Ambient monitoring.** **Ecology will use** ~~the PBT List will be used~~ to help guide decisions on the design and implementation of Ecology programs for characterizing chemical concentrations in the ambient environment.
 - c. **Public awareness.** **Ecology will use** ~~the PBT List will be used~~ to promote greater public awareness on the problems associated with PBT chemicals, the uses and sources of individual PBTs and steps that individuals and organizations can take to reduce PBT uses, releases and exposure.
 - d. **Voluntary measures.** **Ecology will use** ~~the PBT List will be used~~ to **help** identify ~~chemicals that are priorities for voluntary reductions.~~ **opportunities for government agencies, businesses and individuals to implement voluntary measures for reducing and phasing out PBT uses and releases.**
- (3) **Relationship to actions addressing chemical uses and releases.** Ecology has determined that the chemicals on the PBT List pose a **potential** threat to human health and the environment in Washington. ~~However,~~
 - a. Ecology’s decision to **include** ~~list~~ a particular chemical **on the PBT List** does not represent a decision that all uses and releases of that chemical should be **eliminated or banned**. ~~Nor is this list intended to be used to require specific discharge monitoring outside of the scope of existing statutory monitoring requirements for permitted~~

discharges. Ecology will develop recommendations for reducing and, where feasible, phasing out uses and releases of chemicals when preparing CAPs. As discussed in Part IV, Ecology will consider a wide range of factors when preparing recommendations for chemicals.

- b. Ecology does not intend to use the PBT List as the sole basis for establishing discharge monitoring requirements that are not required under current permits. Ecology will evaluate and, if appropriate, prepare recommendations for additional monitoring requirements when preparing chemical action plans (WAC 173-333-420 and -430).

WAC 173-333-310 What chemicals or chemical groups are included on the PBT List?

- (1) **Purpose.** This section identifies the chemicals and chemical groups that Ecology has determined meet the criteria specified in WAC 173-333-320. and the relative rankings that Ecology has assigned to each chemical.
- (2) **PBT List.** Ecology has determined that the following chemicals or chemical groups meet the criteria and listing factors specified in WAC 173-333-320. Each chemical has been assigned a ranking that represents Ecology's preliminary estimate of the relative level of threat to human health and the environment posed by each chemical when compared with other chemicals on the list.

Aldrin/Dieldrin	309-00-2/60-57-1
*Cadmium (pending review of bioavailability)	7440-43-9 (a)
Chlordane	57-74-9
Chlordecone (Kepone)	3734-48-3
DDT, p,p'-	50-29-3
Endrin	72-20-8
Heptachlor/Heptachlor epoxide	76-44-8/1024-57-3
Hexabromobiphenyl	36355-01-8
Hexabromocyclododecane	25637-99-4
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
*Lead (pending review of bioavailability)	7439-92-1 (b)
Mercury	7439-97-6
Mirex	2385-85-5
Nonylphenol (NP)/nonylphenol ethoxylates (NPE)	25154-52-3/9016-45-9 (c)
Perfluorooctane sulfonates (PFOS)	(d)
Pentachlorobenzene	608-93-5
Polycyclic aromatic hydrocarbons (PAHs)	(e)
Polybrominated dibenzo-p-dioxins and dibenzofurans	(f)

(PBDD/PBDF)	
Polybrominated diphenyl ethers (PBDEs)	(g)
Polychlorinated biphenyls (PCBs)	1336-36-3
Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)	(h)
Polychlorinated naphthalenes (PCN)	70776-03-3 (i)
Short-chain chlorinated paraffins (SSCP)	85535-84-8 (j)
Tetrabromobisphenol A	79-94-7
Tetrachlorobenzene, 1,2,4,5-	95-94-3
Toxaphene	8001-35-2

ADD EXPLANATORY NOTES

(3) **Categories Relative rankings.** Ecology will assign each chemical on the PBT List to one of the following three categories: ~~The methodology in Appendix A is used to assign each chemical on the PBT List to one of the following three relative ranking categories:~~

- a. **Category 1:** ~~Ecology will place~~ Chemicals in this category ~~if the department determines that the chemical is used, released or present in Washington. are considered to pose a higher threat to human health and the environment than chemicals in the other two categories. Chemicals in this category received ranking scores that are in the top third of the relative ranking scores for all of the chemicals on the list.~~
- b. **Category 2:** ~~Ecology will place~~ Chemicals in this category ~~if the department determines that there is insufficient information to reach a conclusion on whether the chemical is used, released or present in Washington. are considered to pose threats to human health and the environment that are midway between the threats posed by chemicals in the other two categories. Chemicals in this category received ranking scores that are in the middle third of the relative ranking scores for all of the chemicals on the list.~~
- c. **Category 3:** ~~Ecology will place~~ chemicals in this category ~~if the department determines that (i) all uses and releases of the chemical are prohibited under other state or federal laws or regulations or (ii) there are no feasible measures for reducing or phasing out uses and releases of the chemical beyond levels required under other federal and state laws and regulations, or (iii) is not present in Washington's environment. Chemicals in this category are considered to pose a lower threat to human health and the environment than chemicals in the other two categories. Chemicals in this category received ranking scores that are in the bottom third of the relative ranking scores for all of the chemicals on the list.~~

(4) **Revising the PBT List.** Ecology will ~~shall~~ periodically review and, as appropriate, revise the PBT List in subsection (2) using the criteria and procedures in WAC 173-333-320 through -340. ~~and Appendix A.~~

- (1) **Purpose.** This section describes the criteria ~~and listing factors which~~ that Ecology will use ~~be used~~ to determine whether a chemical or group of chemicals should be included on the PBT List.
- (2) **Criteria for identifying PBTs.** A chemical or group of chemicals, ~~and/or their breakdown products, may~~ will be included on the PBT List if Ecology determines it meets each of the following criteria:
- (a) **Persistence.** The chemical or chemical group can persist in the environment based on evidence that:
 - (i) The half-life of the chemical in water is greater than or equal to sixty (60) days; or
 - (ii) The half-life of the chemical in soil is greater than or equal to 60 days; or
 - (iii) The half-life of the chemical in sediments is greater than or equal to 60 days; and
 - (b) **Bioaccumulation.** The chemical or chemical group has a high potential to bioaccumulate based on evidence that the bioconcentration factor or bioaccumulation factor in aquatic species for the chemical is greater than 1000 or, in the absence of such data, that the log-octanol water partition coefficient(log Kow) is greater than five (5); ~~or~~ and;
 - (c) **Toxicity.** The chemical or chemical group has the potential to be toxic to humans or plants and wildlife based on evidence that:
 - i. The chemical or a chemical group is known to cause or can reasonably be anticipated to cause cancer or teratogenic effects, reproductive effects, neurological disorders or other acute or chronic health effects; or
 - ii. The chemical or chemical group is known to cause or can reasonably be anticipated to cause adverse effects in aquatic and terrestrial plants and animals.
 - ~~(i) The chemical or a chemical group is a carcinogen and has a cancer slope factor or equivalent toxicity measure greater than 1 (mg/kg/day)⁻¹; or~~
 - ~~(ii) The chemical or chemical group has a reference dose or equivalent toxicity measure that is less than 0.003 mg/kg/day; or~~
 - ~~(iii) The chemical or chemical group has an aquatic toxicity value that is equal to or less than 0.1 mg/l.~~
 - (d) **Additional criteria applicable to metals:** The chemical or chemical group is a metal and Ecology determines that it is likely to be present in forms that are bioavailable ~~and~~ bioaccumulative.
- (3) **Degradation products.** Ecology will consider ~~Both~~ the chemical and its degradation products ~~shall be considered~~ when making decisions on whether a chemical meets the criteria

in subsection (2) of this section. If the chemical or chemical group **meeting the criteria in subsection (2)** results from the degradation or transformation of a parent substance, ~~in the environment~~, **Ecology may also include** the parent substance **on the PBT List**. ~~may also be considered a PBT.~~

- ~~(4) **Listing factors.** Chemicals and chemical groups will be added to the PBT list if Ecology determines that the chemical or chemical group meets each of the following requirements:~~
- ~~(a) The chemical or chemical group meets the PBT criteria specified in subsection (2) of this section;~~
 - ~~(b) The chemical or chemical group is known or suspected to be used in Washington, is known or suspected to be released by Washington sources or is known or suspected to be present in Washington's environment;~~
 - ~~(c) The chemical or chemical group does not have a valid registration issued by the Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act, 7. u.s.c. 136 et seq.~~
 - ~~(d) The chemical or chemical group is not a fertilizer regulated under the Washington Fertilizer Act, chapter 15.54 RCW.~~

WAC 173-333-330 What criteria will Ecology use to remove a PBT from the PBT List?

- (1) Purpose.** This section describes the criteria and factors Ecology will use to determine whether a chemical or group of chemicals should be removed from the PBT List.
- (2) Criteria for removing a chemical from the PBT list.** Ecology will remove a chemical or chemical group from the PBT List if the department determines that **credible** scientific information developed subsequent to the listing decision provides ~~clear and convincing~~ evidence that the chemical or chemical group does not meet the PBT criteria in WAC 173-333-320(2).

WAC 173-333-340 What process will Ecology follow for revising the PBT List?

- (1) Purpose.** This section describes the processes Ecology will use to notify the public and amend the PBT list after making a determination that chemicals or groups of chemicals should be added or removed from the PBT List.
- (2) Reviewing and updating the PBT list:** Ecology ~~will shall~~ review and, as appropriate, update WAC 173-333-310 at least once every ~~four~~ **five** years. The frequency of review will be determined by ~~the amount of~~ **credible** scientific ~~information data~~ available on individual chemicals or chemical groups, ~~and other factors such as specific information~~ **rulemaking petitions** submitted to Ecology, and available agency resources. Ecology will comply with

the requirements for reviewing and responding to rulemaking petitions in the Administrative Procedures Act, Chapter 34.05 RCW.

- (3) **Public notification.** If Ecology makes a preliminary determination that a chemical ~~needs to~~ **should** be added or removed from the PBT List, it will notify the public through an announcement posted on the Ecology website and published in the state register.
- (4) **Amending the PBT List.** If Ecology makes a final determination that a chemical or chemical group should be added or removed from the PBT List, the department will initiate actions to amend WAC 173-333-310 through formal rulemaking.

Part IV - Chemical Action Plans (CAPs)

WAC 173-333-400

What is a chemical action plan (CAP)?

- (1) A chemical action plan (CAP) is a plan that identifies, characterizes and evaluates uses and releases of a specific PBT or a group of PBTs and includes recommendations on actions to protect human health or the environment.
- (2) CAPs will include recommendations on the following types of actions:
 - a. Actions to reduce and phaseout uses and releases of the specific PBT or group of PBTs addressed in the CAP;
 - b. Actions to manage the disposal of products or waste that contain the specific PBT or group of PBTs addressed in the CAP;
 - c. Actions to minimize exposure to the specific PBT or group of PBTs;
 - d. Actions to collect additional information needed to evaluate the feasibility of potential actions; and
 - e. Actions to measure or monitor the effectiveness of actions being implemented in Washington.

~~(1) A chemical action plan (CAP) is a plan that identifies, characterizes and addresses uses and releases of a specific PBT or a group of PBTs and includes recommendations on actions to minimize threats to human health and the environment by reducing and, where feasible, phasing out such uses and releases. CAPs may also include recommendations for information gathering or additional monitoring that may be necessary to better understand a specific PBT. CAPs will address PBT releases from currently regulated point sources, unregulated non-point sources, and individual sources.~~

- (1) **Purpose.** The purpose of this section is to describe the evaluation factors and processes Ecology will use to decide when to ~~develop~~ ~~prepare~~ a chemical action plan for a particular ~~PBT~~-chemical or group of ~~PBT~~ chemicals included on the PBT list.
- (2) **Candidates for CAP development.** Ecology will consider developing chemical action plans for chemicals on the PBT list that meet the following criteria:
- Ecology determines that the chemical or chemical group has a half-life in soil or sediment that is greater than or equal to 180 days; and
 - Ecology determines that the chemical or chemical group has a bioconcentration factor or bioaccumulation factor in aquatic species that is greater than 2000
- (3) **Decision-making process:** Ecology ~~will~~ ~~shall~~ consult with the Department of Health to select the chemicals for chemical action plan preparation. The process for deciding when to prepare a chemical action plan for a particular ~~PBT~~ chemical or group of ~~PBT~~ chemicals includes the following:
- Selection factors.** Ecology ~~will~~ ~~shall~~ consider the following factors when deciding whether to prepare a chemical action plan for a particular ~~PBT~~-chemical or group of ~~PBT~~ chemicals identified in WAC 173-333-~~43~~10(2):
 - Relative ranking. The relative ranking assigned to each PBT based on Ecology's evaluation of information on PBT characteristics, uses of the chemical in Washington, releases of the chemical in Washington, and the levels of the chemical present in the Washington environment.
 - Opportunities for reductions. Whether there are opportunities for reducing or phasing out uses, production or releases of the PBT ~~chemical~~ in Washington. In reviewing available information, the agencies shall consider whether more than one PBT ~~chemical~~ is present in particular products, generated in particular processes or released from particular sources (co-occurring chemicals).
 - Multiple chemical releases and exposures. Scientific evidence on the combined effects of exposure to one or more ~~potential for synergistic interactions between individual PBTs chemicals~~ and other substances commonly present in the Washington environment.
 - Sensitive population groups. Scientific evidence on the susceptibility of various population groups and the potential for elevated exposure to the particular PBT chemical.
 - Existing plans or regulatory requirements. Whether there are existing plans or regulatory requirements that reduce and phase-out uses and releases of a particular PBT or group of PBTs.

- b. **Preliminary selection.** Ecology ~~will~~ ~~shall~~ prepare a written summary of the preliminary decision to prepare a chemical action plan for one or more ~~PBT~~ chemicals and the rationale for selecting that particular ~~PBT~~ chemical or group of ~~PBT~~ chemicals.
- e. **Public notice and comment.** Ecology ~~will~~ ~~shall~~ notify the public when it makes a preliminary selection and provide an opportunity for public review and comment. Ecology ~~will~~ ~~shall~~ notify the public through an announcement published ~~in the Washington state register and~~ posted on the Ecology website. Ecology will also send a written announcement ~~and sent~~ to interested persons and organizations. Ecology ~~will~~ ~~shall~~ provide ~~a minimum of thirty~~ ~~sixty~~ days, ~~from the date the notice is published in the Washington state register~~ for the public to review and submit comments on the preliminary selection. ~~Notice shall also be published in the state register.~~
- d. **Final decision.** Ecology ~~will~~ ~~shall~~ review all public comments on the preliminary selection prior to making a final decision to prepare a chemical action plan for a particular ~~PBT~~ chemical or groups of ~~PBT~~ chemicals. Ecology ~~will~~ ~~shall~~ notify the public of the final decision through an ~~announcement published in the Washington state register and~~ posted on the Ecology website. ~~Ecology will also provide and~~ written notification to individuals or organizations who submitted comments on the preliminary selection. ~~A final decision shall be published in the state register.~~

WAC 173-333-420

What are the contents of a CAP?

(1) **Contents of the chemical actions plans:** Chemical action plans will include, as appropriate, the following types of information, evaluations and recommendations:

- (a) **General chemical information.** General information including, but is not limited to, chemical name, properties, uses and manufacturers.
- (b) **Life cycle analysis.** An analysis of the chemical's life cycle including production, unintentional production, uses and disposal. This will include estimates on the amount of each PBT used and released from various sources or activities in Washington and other sources that may contribute to exposures in Washington.
- (c) **Human health and environmental impacts.** An evaluation of the potential impacts on human health and the environment associated with the use and release of the PBT chemical. This will include consideration of available information on the levels of the PBT present in Washington's environment, the likely fate and transport mechanisms, available body-burden data, toxicological effects, and the incidence of diseases that have been associated with exposure to the particular PBT.
- (d) **Current management approaches.** An evaluation of the regulatory and non-regulatory approaches that influence production, uses, releases and management of each PBT.

(e) **Identification of policy options.** A list of options for managing, reducing or phasing out the different uses and releases of the PBTs addressed in the CAP. The range of options for particular uses and releases shall include:

- (i) A no-action option ;
- (ii) An option that results in the phase-out of PBT uses and releases; and
- (iii) Other options , including the use of available substitutes, that will enable full consideration of the opportunities and constraints for reducing particular uses, releases and exposures.

(f) **Recommendations:** The recommendations will include:

(i) Recommendations on actions to manage, reduce or phase-out uses and releases of the PBT addressed in the CAP. The recommendations will be based on an evaluation of the following factors:

- (A) Feasibility of implementing the action;
- (B) Environmental and human health benefits associated with implementing the action;
- (C) Economic impacts associated with implementing the action; and
- (D) Consistency with existing federal and state regulatory requirements.

(ii) A description of the steps Ecology will take to implement the CAP, including a description of:

- (A) The existing resources and necessary additional budget Ecology intends to use;
- (B) How Ecology intends to inform and educate affected persons about the CAP; and
- (C) How Ecology will promote and assist voluntary actions.

(iii) **Performance Measures:** A description of interim milestones to assess progress and the use of objectively measurable outcomes, including recommendations for environmental and human health monitoring to measure levels of the chemical(s) (in the CAP) over time.

(g) **Other:** Other information that Ecology determines is necessary to support the decision-making process.

(2) **Regulatory consistency:** When evaluating the consistency with existing federal and state regulatory requirements under subsection (1)(f)(i)(D) above, Ecology will:

- (a) Ensure that the recommendations do not violate existing federal or state laws;

(b) Determine if the recommendations would impose more stringent performance requirements on private entities than on public entities, unless already required to do so by federal or state law, and if so, describe the justification for doing so; and

(c) Determine if the recommendations differ from federal regulations and statutes, and if so, explain why the difference is necessary and how Ecology will coordinate with other federal, state, and local laws applicable to the same activity or subject matter.

(3) Economic analyses. In assessing economic impacts under subsection (1)(f)(i)(C), Ecology will evaluate the economic feasibility of implementing the recommendations. This may include an analysis of the probable benefits and costs of the CAP.

Ecology will include, at a minimum, the following content areas in a CAP:

~~(1) Existing information regarding the chemical.~~—This includes, but is not limited to:

- ~~Information on the chemical, products and uses,~~
- ~~Human health exposure, and ecological hazards,~~
- ~~Environmental releases, fate, and transport,~~
- ~~Environmental concentrations and available substitutes,~~
- ~~Technical options for managing uses and releases,~~
- ~~Other information Ecology determines is necessary to support the decision-making process.~~

~~(2) Uses and releases.~~—When identifying the uses and sources of the PBTs addressed in the plan, Ecology will prepare estimates on the amount of each PBT used and released into the Washington's environment.

~~(3) Current management approaches.~~—Evaluation of regulatory and non-regulatory approaches that influence current uses, releases and management of each PBT.

~~(4) Policy Options.~~—Ecology will identify alternative approaches for reducing, and where possible, phasing out the uses and releases of PBTs, or groups of PBTs, identified in the CAP.

~~(5) Recommendations.~~—Ecology will propose recommendations for reducing and where possible phasing out the uses and releases of PBTs, or groups of PBTs, identified in the CAP. The recommendations may also include proposals for further information collection, monitoring, and voluntary measures.

~~(6) Technical Feasibility.~~—Ecology will evaluate the technical feasibility of implementing the recommendations.

~~(6) Regulatory consistency.~~—In determining each recommendation, Ecology will:

~~(a) Ensure that the recommendations do not violate existing federal or state laws.~~

~~(b) Determine if the recommendations pose more stringent performance requirements on private entities than on public entities, (unless already required to do so by federal or state law), and if so, describe the justification for doing so.~~

~~(c) Determine if the recommendations differ from federal regulations and statutes, and if so, explain why the difference is necessary and how Ecology will coordinate with other federal, state, and local laws applicable to the same activity or subject matter.~~

~~(6) Economic analyses.~~ Ecology will evaluate the economic feasibility of implementing the recommendations; this may include an analysis of the probable benefits and costs of the CAP.

~~(7) Proposed implementation recommendations:~~ The CAP will describe how the agency intends to implement the CAP, including a description of:

- ~~• The existing resources and necessary additional budget Ecology intends to use;~~
- ~~• How Ecology intends to inform and educate affected persons about the rule;~~
- ~~• How Ecology will promote and assist voluntary actions.~~

~~(8) Performance Measures:~~ Ecology will describe interim milestones to assess progress and the use of objectively measurable outcomes, including recommendations for environmental and human health monitoring to measure levels of the chemical(s) (in the CAP) over time.

~~(9) Other:~~ Other information Ecology determines is necessary to support the decision-making process.

WAC 173-333-430 **develop CAPs?**

What process will Ecology use to identify & prepare

(1) Purpose Introduction: The purpose of this section is to identify the process Ecology will use follow a process that is consistent with this rule when identifying and preparing to develop CAPs.

(2) Workplan/Scoping: Once a chemical is selected for CAP development, Ecology will initially plan and scope the CAP of the selected chemical based upon available information regarding the chemical's products, uses and releases; human health exposure and ecological hazards; environmental releases, fate, and transport; environmental concentrations and available substitutes; available options for managing uses and releases; estimated costs of alternate management options; and any other information Ecology determines is necessary to support the CAP development process. Ecology will consult with the Department of Health regarding all portions of the CAP related to human health exposures.

(3) Advisory Committee: Ecology will create an external advisory committee for each CAP that Ecology develops. The purpose of the advisory committee is to provide stakeholder input and expertise.

(a) The advisory committee membership will include, but not be limited to representatives from: large and small business sectors, community, environmental and public health advocacy groups, local governments, and public health agencies. When appropriate, representatives from the following groups will also be invited to participate: agricultural groups, worker safety advocacy groups, and other interested parties. Federally recognized tribal governments will also be encouraged to participate. In addition, representation from other state executive agencies may be requested to provide input and to represent agency interests in the CAP development process. Outside experts (if needed) may be requested to provide technical expertise.

(b) A neutral-third party facilitator **may be hired to** ~~will~~ facilitate advisory committee meetings.

(c) The advisory committee will follow a consultative process, where Ecology will draft the CAP in consideration of input from Advisory Committee members.

(d) All advisory committee meetings will be open to the public. **Ecology will notify the public of advisory committee meetings through an announcement posted on the Ecology web site and written notification to interested individuals and organizations.** ~~and will comply with the requirements of the administrative procedures act, chapter 34.05 RCW.~~

(3) Information Collection Phase: Ecology will collect all necessary and up-to-date information regarding the selected chemical. CAP Advisory committee members **will be asked to** ~~are encouraged to~~ contribute, and **as appropriate, review information from relevant and appropriate information to** Ecology during this phase of CAP development. **The Department of Health will be asked to review any information related to human health.** ~~The Department of Health will be asked to assist in the collection and interpretation of information for all portions of the CAP related to human health exposures.~~

(4) Draft Recommendations: Ecology will develop a draft CAP for **advisory committee** ~~public~~ review and comment. **Ecology will review all advisory committee comments and, as appropriate, revise the draft CAP prior to distributing it for public review and comment.** ~~The draft CAP will contain draft recommendations on actions to take to further manage threats to human health and the environment posed by the use and releases of selected PBT.~~

(5) Public Review and Comment: **Ecology will notify the public when it has developed a draft CAP and provide an opportunity for public review and comment.** The public comment period for each draft CAP will be a minimum of **60** ~~30~~ days ~~and shall not exceed 60 days.~~ **Ecology will notify the public through an announcement posted concurrently on the Ecology website, a notice in the Washington State Register, and sent to interested persons and organizations. The comment period shall start from the date the notice is published in the Washington State**

Register. During the comment period, Ecology will hold a minimum of two public meetings on the draft CAP. One meeting shall be held on the western side of the state, and one meeting shall be held on the eastern side of the state. Ecology may hold additional public meetings during the public comment period if determined necessary.

- (6) Final Recommendations:** Ecology will review all public comments on the draft CAP prior to issuing the final recommendations. Ecology will notify the public of the final recommendations through an announcement published in the state register and posted on the Ecology website. Ecology will also provide written notification to individuals or organizations who submitted comments on the draft CAP. ~~Upon completion of the public comment period, Ecology will issue a final CAP. The final CAP will contain final recommendations on actions to take to further manage threats to human health and the environment posed by the use and releases of selected PBT.~~